

COUNTY BRIDGE NO. 14
T-493 Over Tioga River at Canoe Camp
Mansfield Vicinity
Tioga County
Pennsylvania

HAER No. PA-421

HAER
PA
59-MANS.V
1-

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

HISTORIC AMERICAN ENGINEERING RECORD
National Park Service
Philadelphia Support Office
U.S. Custom House
200 Chestnut Street
Philadelphia, PA 19106

Historic American Engineering Record

County Bridge No. 14

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Location:

T-493 Over Tioga River at Canoe Camp, Mansfield Vicinity.
Tioga County, Pennsylvania
UTM: 18.327850.4627420
Quad: Mansfield, PA, 1;24,000

Date Of Construction:

1896

Builder:

Owego Bridge Company, Owego, New York

Present Owner:

Tioga County Commissioners, Tioga County Court House
118 Main Street, Wellsboro, Pennsylvania 16901

Present Use:

Vehicular Bridge

Significance:

This bridge is one of the few remaining examples of a Baltimore truss in Pennsylvania. The State Historic Preservation Officer, Pennsylvania Historical and Museum Commission, has determined that the bridge is eligible for listing on the National Register of Historic Places. They have determined that the bridge is an excellent example of a Baltimore truss with good integrity. The bridge company and size of the bridge make it an unusual and important example of its type. The bridge is a riveted iron single span Baltimore thru truss design, measuring 187 feet in length. Truss connections are pinned, and the eye bars are die forged. The portals of the bridge are decorated with the bridge builder's company name and location. Other decorative motifs include arrows and flowers. This represents one of the few extant examples of Victorian Age decoration on a vehicular bridge in Pennsylvania. In addition, at each approach to the bridge, ornamental iron lattice is present at the top of the portal struts. At the west approach to the bridge, a manufacturers' plate is present. A plate listing the date of construction is also present (1896), centered between the portals. At the east approach to the bridge, an iron plate listing the County Commissioners names is centered between the portals. The abutments of the bridge are of stone masonry construction.

Project Information:

Documentation of this bridge was accomplished as part of The Preliminary Cultural Resource Review Form (PCRRF) review. Review of the PCRRF by the State Historic Preservation Officer determined that the bridge was eligible for listing on the National Register of Historic Places. To mitigate the adverse effect upon the bridge, the State Historic Preservation Officer stipulated HAER documentation of the bridge within its setting. This documentation was undertaken to fulfill this requirement.

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INTRODUCTION

County Bridge No 14 (T-493 Over Tioga River at Canoe Camp) is located in the Mansfield vicinity, Richmond Township, Tioga County, Pennsylvania. For purposes of this report, the bridge will be referred to as County Bridge No. 14. The bridge was constructed in 1896, and has been determined by the State Historic Preservation Officer to be eligible for listing on the National Register of Historic Places due to it being an excellent example of a Baltimore truss with good integrity. In addition, the bridge company and the size of the bridge make it an unusual and important example of its type. Decorative Victorian motifs on the portals and decorative iron lattices atop the portal struts are unique and unusual features rarely found on vehicular bridges in Pennsylvania. In spite of the deteriorated condition of the bridge, the decorative features have remained unaltered. This report describes the bridge and its engineering significance and documents its local historical and architectural significance.

PHYSICAL DESCRIPTION OF BRIDGE AND SETTING

County Bridge No. 14 carries T-493 over the Tioga River, and is 61 meters (200 feet) west of the village of Canoe Camp and SR 15. Near the southeast corner of the bridge, Canoe Camp Creek meets the Tioga River. Canoe Camp contains both commercial and residential properties. West of County Bridge No. 14, land use is both residential and agricultural. Commercial development in the vicinity of the bridge is largely confined to the SR 15 traffic corridor. Tioga County has owned the bridge from the time of its erection in 1896.

County Bridge No. 14 is a single span iron Baltimore thru truss design, measuring 57 meters (187 feet) in length. The bridge carries only one lane of traffic, and has a posted clearance of 4.19 meters (13.75 feet). Posted weight limits are 6 tons, except 10 tons combination. Roadway width at the approaches to the bridge is 4.99 meters (16 feet). Clearance under the bridge is 4.6 meters (15 feet). The entire superstructure of the bridge has been painted with silver paint. The top and bottom chords of the bridge are constructed of iron plates, riveted together to form built up sections. Struts between the sides of the upper chord are constructed of lattice. Truss vertical and horizontal members are constructed of iron members or iron lattice. Top lateral braces are die forged iron rods. Diagonal bracing between verticals and the top and bottom chords consists of paired die forged iron rods, terminating in pin connections. Floor beams are made of riveted steel beams, and are attached to the vertical and diagonal struts by pins. Physical deterioration of the floor beams has occurred. The original lower diagonal lateral bracing has been repaired or replaced in various places. The original stringers were attached to the web of floor beams as evidenced by remaining connection plates. The existing steel stringers bear on top of original floor beams and are rolled steel sections. Iron lattice railings are present

on both sides of the bridge. Height of the top of the railings is 89 centimeters (2.9 feet) above the bridge deck. A narrow walkway of the north side of the bridge deck is made of steel plates, and is 56 centimeters (1.83 feet) wide. Bridge decking consists of open steel grid. It is unknown if this is original. The east portal of the bridge has brackets that are marked "OBC Owego NY". The upper and lower corners of each bracket have an arrow head motif. Between the lettering of the brackets and the outer corners of the brackets, a flower motif has been cut out of the portal brackets. A name plate listing the County Commissioners at the time of erection of the bridge is attached to the lower portal strut. The names on the plate are "J F PITTS, T H BAILEY, W H GARRISON, COMM". Attached to the top of the upper portal strut is a decorative iron lattice. At the west portal, similar decorative motifs are cut into the portal brackets. A manufacturers plate is attached to the lower portal strut and reads "OWEGO BRIDGE Co OWEGO NY 1896". A decorative iron lattice is attached to the top of the upper portal strut. Massive bearing seats at each of the four end post to lower chord connections are connected by large pins. Extensive rusting of the bearing seat bottom plates has occurred. The abutments and wing walls are constructed of cut stone. A concrete cap has been placed atop the stone masonry at each abutment. Bearings are anchored to concrete seats with steel anchor bolts. The wing walls have been extensively damaged by erosion by the Tioga River and Canoe Camp Creek. Rip rap has been placed along the base. Remains of wood pilings and planks are present off the northeast and southwest corners of the bridge foundations.

LOCAL HISTORICAL BACKGROUND

The first settler in this area was (Judge) Samuel Baker, who built a cabin at the confluence of the Tioga and Cowanesque Rivers in 1787. Access into this area improved after the Williamson Road was cut, going from Lycoming County northward to New York state. The Williamson Road was constructed to Canoe Camp by 1792. From this location the men traveled by canoe to Painted Post New York (Brown 1897). U. S. Route 15 closely follows the Williamson Road (Wallace 1987). Many settlers entered this area by means of this road. Tioga County was created from Lycoming County on March 26, 1804.

The early settlers are said to have come from New York, Connecticut, Massachusetts, Rhode Island, New Jersey, Pennsylvania, Maryland, Virginia, and Delaware.

Population growth during the 19th century was steady, and slowly leveled off around 1875. Richmond Township was organized in February of 1824. Agriculture and the sale of lumber supplemented the production of coal and formed the basis of the local economy throughout the 19th century. The first saw mill of Richmond Township was constructed in 1803 one mile south of Mansfield (Brown 1897:567-574).

Amos Spencer settled at Canoe Camp in 1806 and built a grist mill one year later, the frame of which was purchased from the late Elihu Marvin's wife. In addition to the grist mill Amos Spencer constructed a saw mill in 1812. This was the fourth saw mill to be erected in Richmond Township. Spencer replaced the grist mill two times, 1857 being the

latest. On May 20, 1879 both of Amos Spencer's mills burnt to the ground. The mills, destroyed by fire, were replaced in 1883 by A. M. Spencer, Amos Spencer's grandson (Brown 1897:567-574).

The earliest reference to any bridge in the area of Canoe Camp, crossing the Tioga River near Canoe Camp Creek was found in the 1831 Road Docket at the Tioga County Courthouse. In it there is mention of constructing a "... bridge over the Tioga River a little below where the public highway to Spencer's mill crosses the said river..." (County Road Docket 1831). It is unknown exactly how the road would have crossed the river at this time, but later in the same document there is a recommendation to change the alignment of the road to save "...expense in the erection of the aforesaid bridge...", and on the west side of the river to meet up with "...the county road leading to Spencer's Mill" (County Road Docket 1831).

In the 1862 County Map by H. F. Walling, and later in more detailed 1875 F. W. Beers & Co. Atlas of Tioga Pennsylvania, the road and bridge are drawn as described in the 1831 Road Docket.

When the current bridge was erected in 1896 it used the same or very similar alignment as the old bridge, modifying the approach only slightly on the west side of the river. On February 6, 1896 The Wellsboro Gazette reported that the "Citizens of Richmond petitioned for the appointment of viewers to examine the county bridge across the Tioga River at Canoe Camp for the purpose of having a new bridge erected by the county. On March 6, 1896 the Auditors Report, published in the Wellsboro Gazette, stated that in the spring of 1895 the county decided to build six new bridges, one of which was to be built at Canoe Camp. A notice was published in the Wellsboro Agitator on May 1, 1895 stating that bids would be received until noon of May 4, 1895 for the building of two bridges at Mansfield and Canoe Camp. Eight bids were received for the ironwork of the two bridges, ranging from \$3396 to \$3664, and were rejected as too high. On May 11, 1895, without public notice, contracts were made with the Groton Bridge Company, Nelson and Buchanan, and the Owego Bridge Company for the iron work of six bridges. Canoe Camp bridge cost \$1400. On June 4, 1896, the Wellsboro Gazette reported that "The Owego Bridge Company secured the contract for building an iron bridge over the Tioga River at Canoe Camp, in Richmond Township, for \$4750. This bridge will be a 185 foot span with a 16 foot roadway, and is to be finished by September 1st."

A search of the Tioga County Commissioners minutes at the Tioga County Court House did not discover minutes for 1896. Examination of the 1895 Index to Book of Payments contained an entry listing Reuben Curtis as having been paid for the abutments at Canoe Camp, contract April 9, 1895, total cost \$3115.27. Road Dockets on file in the Tioga County Prothonotaries Office listed "Bridge Over Tioga River at Canoe Camp "Confirmed May 4, 1896" (Road Docket No. 3, Vol. G), and Inspection of the bridge in September of 1896 (Road Docket No. 3, Vol. G).

HISTORY OF OWEGO BRIDGE COMPANY

The history of the Owego Bridge Company is closely associated with the Colby brothers. One of the Colby Brothers, Elery Colby held a patent for a bridge truss design, and was associated with the Pemigo Foundry, until it was re-incorporated as the Groton Bridge Company in 1887. Elery Colby, H. P. Colby and Frank Congers were among the trustees of the Groton Bridge Company. In 1891 the Colby brothers sold their interest in the Groton Bridge Company, and began a search for a location to start a new bridge company. In 1892 the businessmen of the town of Owego were searching for a company to occupy the vacant Southern Central Railroad shops, and offered a \$2000.00 bonus for a business that would relocate there. The Owego Gazette reported in 1892 that the principal stockholders of the Owego Bridge Company were Ellery Colby, Henry Colby, Loring Colby, Frank Colby, Mr. Johnson, and Elery Colby's son. The company was expected to employ 25 men. The company was started with capital amounting to \$50000.00 (Owego Gazette March 17, 1892). The New York Factory Inspectors Reports list employment by the Owego Bridge Company at 12 men in 1892, 50 men in 1893, 40 employees in 1894, 80 men in 1897, 30 men in 1899, and 50 men in 1900 (Goddard 1992).

During the 1890's, the Owego Bridge Company built hundreds of bridges, mostly in the southern tier of New York and Northern Pennsylvania. No company records have survived from this time period. In 1901 Elery Colby sold his interests in the Owego Bridge Company to the American Bridge Company (Owego Gazette, April 2, 1925). Frank Conger bought to Owego Bridge Company from the American Bridge Company, and also ran the Groton Bridge Company. Both companies were successful in both bridge building and structural steel fabrication. In 1910, Clarence Mallory was the Chief Engineer for the company, and brought a lot of business to the company. Mallory invented a steel form used for aqueduct construction. By 1913 the company went out of business, unable to procure steel to use for fabrication (Goddard 1992). The American Bridge Company monopolized the bridge building business, and put many of their competitors out of business.

The significance of County Bridge No. 14 in the local historical context, derives from its connection to the Spencer Mill, located west of the bridge, and the historical connections of the Spencer family to Richmond Township. Modern day SR 15 closely follows the Williamson Road, which was the first road in Tioga County. After the settlement of Amos Spencer in Richmond Township in 1806, and his erection of a grist mill and saw mill, the first industry in the township occurred. Throughout the 19th century, the Spencer family continued their milling business, with the bridge serving as a connection to the former Williamson Road (now SR15). County Bridge No. 14 has survived over 100 years without losing its unique decorative motifs. The Victorian style motifs and lattices are rare examples of a time when bridges had ornamentation. The uniqueness of the Baltimore truss design, itself an outgrowth of railroad bridges of the Pennsylvania Railroad, is a regional engineering accomplishment (Commonwealth of Pennsylvania 1986:118). Few

examples of this type of truss design exist in Pennsylvania. The invention of the Baltimore truss, and the expansion of the railroads during the latter half of the 19th century illustrate changes in the economy and technology. The 19th century industrial revolution led to the development of iron foundries which produced structural steel. The availability of structural steel, and advances in bridge engineering design led to a replacement of the many wooden bridges in the United States. Pennsylvania changed from a largely agrarian economy to an industrial economy during this time. Prefabricated bridges enabled rural counties the opportunity to improve their transportation system at an affordable cost.

SOURCES OF INFORMATION/BIBLIOGRAPHY

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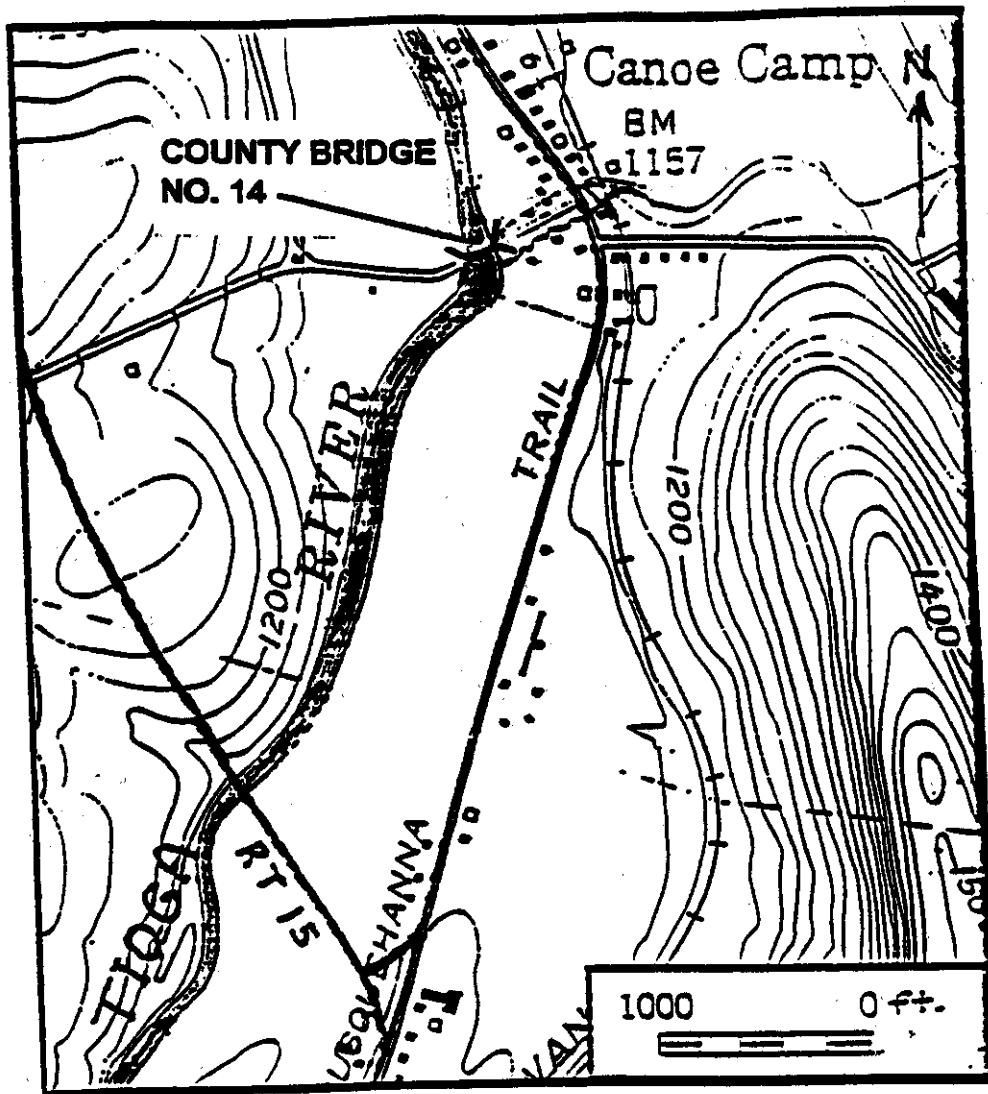
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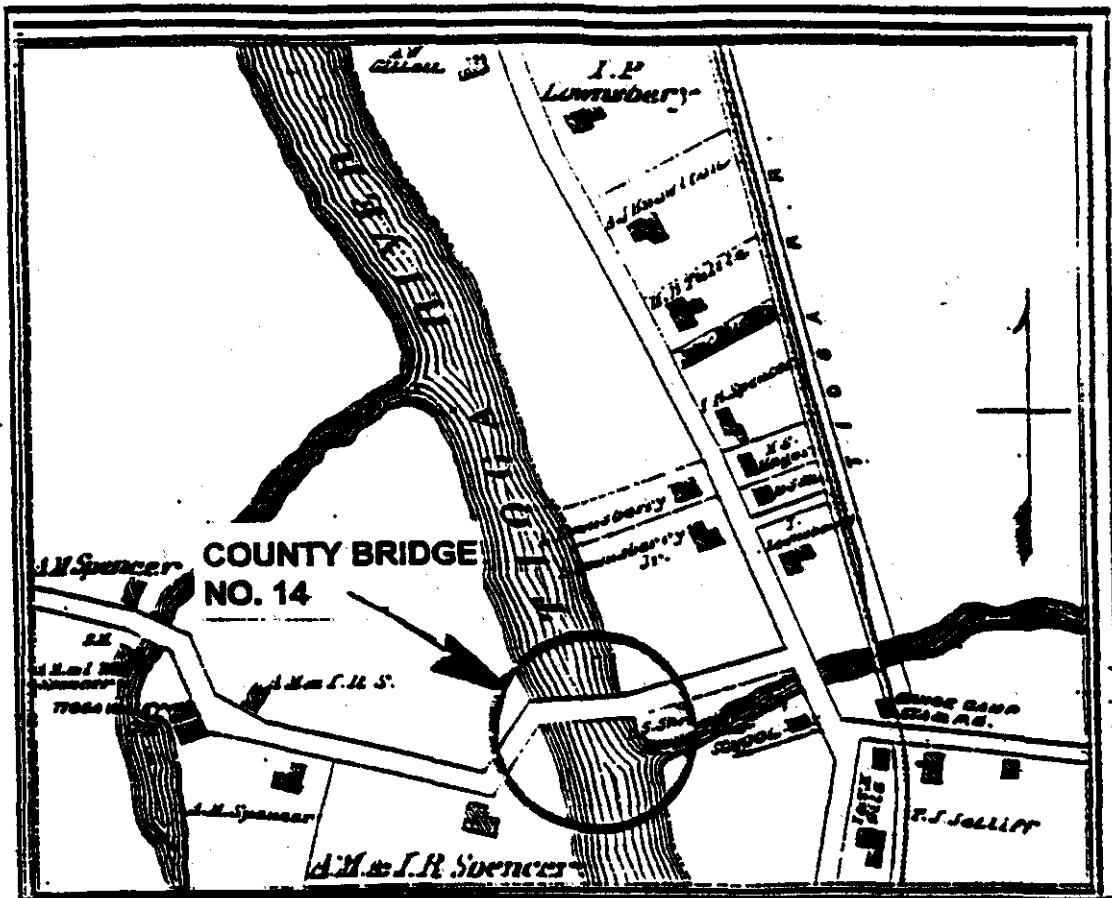
Unpublished Reports and Documents

A thorough search was undertaken of repositories for original photographs, and none were found to exist. Repositories searched include the Tioga County Courthouse files and archives, Wellsboro; The Tioga County Historical Society, Wellsboro; the Mansfield University Library and Archives; and the Tioga County Historical Society Library and Archives, Owego.



BRIDGE LOCATION MAP

SOURCE: USGS MANSFIELD 7.5' QUAD



CANOE CAMP VICINITY IN 1875

SOURCE: BEERS 1875